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Report on
2011 International Conference on Socio-Cultural Behavior and
Prediction

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I. INTRODUCTION

The 2011 Socio-Cultural Computing, Behavior Modeling, and Prediction (SBP) conference in 2011 was held in March 2011 in College Park, MD. Prior to this, three editions of the Social Computing, Behavior Modeling, and Prediction Conference were held in 2008 and 2009 in Phoenix, AZ, and in Bethesda, MD in 2010. At the same time, there have been three past editions of the International Conference on Computational Cultural Dynamics (ICCCD) which has also had a similar goal: develop the scientific underpinnings to support automated and semi-automated learning of the behaviors of models of groups (taken broadly to mean cultural groups, tribe, terror groups, political organizations, etc.) and for the formulation of policy towards such groups that would best serve US interests.

SBP 2011 was the first year that these two groups came together into the merged (and slightly re-named conference). The goal of the conference is to bring together researchers working on the core social science, mathematics, and computational underpinnings underlying the behaviors of different types of entities worldwide.

SBP-2011 brought together a broad array of scientists including social scientists (psychology, public policy, political science, and economics), as well as computer scientists and mathematicians, to address problems related to:

- Building data sets associated with a group of interest – either automatically or semi-automatically, by taking into account, known social science theories of such groups.
- Learning behavioral models of group behaviors and representing the learned knowledge using appropriate knowledge representation paradigms
- Designing prediction algorithms to forecast what these groups might do in the future both during a given future time frame, as well as in real or hypothetical situations
- Understanding how a set of groups located in a given part of the world may “play off” one another using appropriate models of trust and self-interested and consensual behavior and game theory
- Storing, understanding and manipulating the structure of networks governing social groups, and
- Developing interaction environments that support the use of such tools by analysts.

II. CONFERENCE DETAILS

SBP 2011 attracted:

- Approximately 140 registered participants from several different countries;
- 4 keynote speakers spanning areas including economics, computer science, and public health;
- 2 invited speakers;
- 3 tutorials on social media technologies and tools;
- 20 refereed papers for oral presentation;
- 25 refereed papers for poster presentation;
- A federal funding panel and
- Multiple round-table discussions.

Keynote lectures included the following distinguished speakers.

Kimberly Thompson

Kid Risk, Inc.

[Using Models to Inform Policy: Insights from Modeling the Complexities of Global Polio Eradication](#)

- March 29, 8:30-9:15am

Peter Cramton

University of Maryland

[Medicare Auctions: A Case Study of Market Design in Washington, DC](#)

- March 29, 1:00-1:45pm

Herbert Gintis

Central European University and the Santa Fe Institute

[Agent-based Models of Complex Dynamical Systems of Market Exchange](#)

- March 30, 8:15-9:00pm

Sarit Kraus

Bar-Ilan University and University of Maryland

[Agents that Negotiate Proficiently with People](#)

- March 31, 8:15-9:00am

In addition to the keynote speakers, the following tutorials were offered to all registered participants.

[Toolkits for Computational Social Science: Using Honest Signals to Predict and Shape Human Responses](#) by **Alex 'Sandy' Pentland**, MIT

[Social Network Analysis of Personal and Group Networks](#)

by

Allen Tien, Medical Decision Logic

Chris McCarty, University of Florida Survey Research Center

Eric C Jones, University of North Carolina-Greensboro

and

[Understanding Social Media: Tools, Applications, and Processes](#)

by **Nitin Agarwal**, University of Arkansas at Little Rock

Cross-Fertilization round-table sessions were held in the afternoon of the first day of the technical portion of the conference. The purpose of the cross-fertilization roundtables was to help participants become better acquainted with people outside of their discipline and with whom they might consider partnering on a future SBP project.

To accomplish this goal, the workshop will featured 3-4 sessions, each lasting up to 30 minutes. During each session, a number of roundtables ran concurrently. Each roundtable focused on a different topic with approximately 6-10 participants per table. Conference organizers assigned participants to roundtables based on their interests in order to ensure that the composition of each roundtable offers opportunities for behavioral and social scientist to meet systems scientists and vice versa. Thus, by the end of the workshop period, each participant should have had an opportunity to converse with a variety people from complementary disciplines.

It is the intent of the conference organizers that these roundtables will spawn the formation of numerous interdisciplinary investigative teams, and that those teams will collaborate on grant

applications to sponsoring funding agencies. More details regarding the preconference tutorial sessions, including instructors, course content, and registration information will be posted to the conference website as soon as this information becomes available at <http://www.umiacs.umd.edu/conferences/sbp2011/index.html>.

III. PROCEEDINGS

The Proceedings of the SBP 2011 conference were published by Springer as:

Social Computing, Behavioral-Cultural Modeling and Prediction: 4th International Conference, SBP 2011, (eds. J. Salerno, S. Yang, D. Nau and S.K. Chai), Springer Lecture Notes in Computer Science, Volume 6589, College Park, MD, USA, March 29-31, 2011

The Proceedings contain a total of 51 papers, selected from a total of 88 submissions. All participants received a copy of the proceedings as part of their registrations.